

Search Plan and Results

Question

[What is the relationship between the environment, body weight and fruit/vegetable consumption? \(DGAC 2010\)](#)

Date Searched

12/16/2009

Inclusion Criteria

- January 2000 to present
- Systematic reviews and meta-analysis
- Human subjects
- English language
- International
- *Ages:* Children under age 18 years; Adults 19 years and older
- *Populations:* Healthy and those with elevated chronic disease risk; people with history of polyps adenomatous, adenoma or adenocarcinoma.

Exclusion Criteria

- Medical treatment/therapy
- Cross-sectional studies (for research questions two to five only)
- Narrative reviews, RCT or clinical controlled studies, large non-randomized observational studies, cohort, case-control studies, cross-sectional studies
- Diseased subjects (already diagnosed with disease related to study purpose)
- Hospitalized patients
- Malnourished/third-world populations or disease incidence not relative to US population (e.g., malaria)
- Animal studies
- In vitro studies
- Articles not peer reviewed (websites, magazine articles, Federal reports, etc.).

Search Terms: Search Vocabulary

("Environment"[Mesh] OR "Social Environment"[Mesh] OR "Socioeconomic Factors"[Mesh]) AND ("energy intake*" OR diet[mesh] OR "Body Weights and Measures"[Mesh] OR "diet quality" OR (food[mesh] AND intake*) OR "dietary intake*")

(Obesity[mh] OR "body weight"[mh] OR "body size"[mh] OR fruit[mh] OR

vegetables[mh]) AND ("Environment"[Mesh] OR "Social Environment"[Mesh] OR "Socioeconomic Factors"[Mesh]) AND (food[mesh] AND intake*) OR "dietary intake*" OR "energy intake"[mh])

Electronic Databases

PubMed

Total hits from all electronic database searches: 320

Total articles identified to review from electronic databases: 66

Articles Identified Via Handsearch or Other Means

Summary of Articles Identified to Review

Number of Primary Articles Identified: 0

Number of Review Articles Identified: 10

Total Number of Articles Identified: 10

Number of Articles Reviewed but Excluded: 56

List of Articles Included for Evidence Analysis

Black JL, Macinko J. [Neighborhoods and obesity](#). *Nutr Rev*. 2008 Jan; 66 (1): 2-20. Review. PMID: 18254880.

Casagrande SS, Whitt-Glover MC, Lancaster KJ, Odoms-Young AM, Gary TL. [Built environment and health behaviors among African Americans: A systematic review](#). *Am J Prev Med*. 2009 Feb; 36 (2): 174-181. Review. PMID: 19135908.

Dunton GF, Kaplan J, Wolch J, Jerrett M, Reynolds KD. [Physical environmental correlates of childhood obesity: A systematic review](#). *Obes Rev*. 2009 Jul; 10 (4): 393-402. Epub 2009 Mar 6. Review. PMID: 19389058.

Ford PB, Dzewaltowski DA. [Disparities in obesity prevalence due to variation in the retail food environment: Three testable hypotheses](#). *Nutr Rev*. 2008 Apr; 66 (4): 216-228. Review. PMID: 18366535.

Giskes K, Kamphuis CB, van Lenthe FJ, Kremers S, Droomers M, Brug J. [A systematic](#)

[review of associations between environmental factors, energy and fat intakes among adults: Is there evidence for environments that encourage obesogenic dietary intakes?](#) *Public Health Nutr.* 2007 Oct; 10 (10): 1, 005-1, 017. Epub 2007 Feb 22. Review. PMID: 17381942.

Holsten JE. [Obesity and the community food environment: A systematic review.](#) *Public Health Nutr.* 2009 Mar; 12 (3): 397-405. Epub 2008 May 14. Review. PMID: 18477414.

Jago R, Baranowski T, Baranowski JC. [Fruit and vegetable availability: A micro environmental mediating variable?](#) *Public Health Nutr.* 2007 Jul; 10 (7): 681-9. Epub 2007 Feb 20. PMID: 17381953.

Kamphuis CB, Giskes K, de Bruijn GJ, Wendel-Vos W, Brug J, van Lenthe FJ. [Environmental determinants of fruit and vegetable consumption among adults: A systematic review.](#) *Br J Nutr.* 2006 Oct; 96 (4): 620-635. Review. PMID: 17010219.

Papas MA, Alberg AJ, Ewing R, Helzlsouer KJ, Gary TL, Klassen AC. [The built environment and obesity.](#) *Epidemiol Rev.* 2007; 29: 129-143. Epub 2007 May 28. Review. PMID: 17533172.

van der Horst K, Oenema A, Ferreira I, Wendel-Vos W, Giskes K, van Lenthe F, Brug J. [A systematic review of environmental correlates of obesity-related dietary behaviors in youth.](#) *Health Educ Res.* 2007 Apr; 22 (2): 203-226. Epub 2006 Jul 21. Review. PMID: 16861362.

List of Excluded Articles with Reason

Article	Reason for Exclusion
<p>Adachi-Mejia AM, Longacre MR, Gibson JJ, Beach ML, Titus-Ernstoff LT, Dalton MA. Children with a TV in their bedroom at higher risk for being overweight. <i>Int J Obes (Lond).</i> 2007 Apr; 31 (4): 644-651. Epub 2006 Sep 12. PMID: 16969360.</p>	<p>Study design is cross-sectional.</p>
<p>Anderson LM, Quinn TA, Glanz K, Ramirez G, Kahwati LC, Johnson DB, Buchanan LR, Archer WR, Chattopadhyay S, Kalra GP, Katz DL; Task Force on Community Preventive Services. The effectiveness of worksite nutrition and physical activity interventions for controlling employee overweight and obesity: A systematic review. <i>Am J Prev Med.</i> 2009 Oct; 37 (4): 340-357. Review. PMID: 19765507.</p>	<p>Does not answer the question; examined the relationship between work site interventions and weight.</p>
<p>August GP, Caprio S, Fennoy I, Freemark M, Kaufman FR, Lustig RH, Silverstein JH, Speiser PW, Styne DM, Montori VM; Endocrine Society. Prevention and treatment of pediatric obesity: An endocrine society clinical practice guideline based on expert opinion. <i>J Clin Endocrinol Metab.</i> 2008 Dec; 93 (12): 4, 576-4, 599. Epub 2008 Sep 9. Review. PMID: 18782869.</p>	<p>Does not answer the question; did not examine the relationship between the food environment and weight.</p>

<p>Ayala GX, Baquero B, Klinger S. A systematic review of the relationship between acculturation and diet among Latinos in the United States: Implications for future research. <i>J Am Diet Assoc.</i> 2008 Aug; 108 (8): 1, 330-1, 344. Review. PMID: 18656573.</p>	<p>Does not answer the question; did not examine the relationship between the food environment and weight.</p>
<p>Baird J, Cooper C, Margetts BM, Barker M, Inskip HM; Food Choice Group, University of Southampton. Changing health behaviour of young women from disadvantaged backgrounds: Evidence from systematic reviews. <i>Proc Nutr Soc.</i> 2009 May; 68 (2): 195-204. Epub 2009 Feb 11. Review. PMID: 19208272.</p>	<p>Does not answer the question; did not examine the relationship between the food environment and weight.</p>
<p>Ball K, Crawford D. Socioeconomic status and weight change in adults: A review. <i>Soc Sci Med.</i> 2005 May; 60 (9): 1, 987-2, 010. Epub 2004 Nov 11. Review. PMID: 15743649.</p>	<p>Does not answer the question; did not examine the relationship between the food environment and weight.</p>
<p>Baranowski T, Missaghian M, Broadfoot A, Watson K, Cullen K, Nicklas T, Fisher J, Baranowski J, O'Donnell S. Fruit and vegetable shopping practices and social support scales: A validation. <i>J Nutr Educ Behav.</i> 2006 Nov-Dec; 38 (6): 340-351. PMID: 17142190.</p>	<p>Study design is cross-sectional.</p>
<p>Benedict MA, Arterburn D. Worksite-based weight loss programs: A systematic review of recent literature. <i>Am J Health Promot.</i> 2008 Jul-Aug; 22 (6): 408-416. Review. PMID: 18677881.</p>	<p>Does not answer the question; did not examine the relationship between the food environment and weight.</p>
<p>Brown T, Summerbell C. Systematic review of school-based interventions that focus on changing dietary intake and physical activity levels to prevent childhood obesity: An update to the obesity guidance produced by the National Institute for Health and Clinical Excellence. <i>Obes Rev.</i> 2009 Jan; 10 (1): 110-141. Epub 2008 Jul 30. Review. PMID: 18673306.</p>	<p>Does not answer the question; did not examine the relationship between the food environment and weight.</p>
<p>Buchanan L, Likness S. Evidence-based practice to assist women in hospital settings to quit smoking and reduce cardiovascular disease risk. <i>J Cardiovasc Nurs.</i> 2008 Sep-Oct; 23 (5): 397-406. PMID: 18728512.</p>	<p>Study design is a narrative review.</p>
<p>Carter FA, Bulik CM. Childhood obesity prevention programs: How do they affect eating pathology and other psychological measures? <i>Psychosom Med.</i> 2008 Apr; 70 (3): 363-371. Epub 2008 Mar 31. Review. PMID: 18378876.</p>	<p>Does not answer the question; did not examine the relationship between the food environment and weight.</p>

<p>Clarke KK, Freeland-Graves J, Klohe-Lehman DM, Milani TJ, Nuss HJ, Laffrey S. Promotion of physical activity in low-income mothers using pedometers. <i>J Am Diet Assoc</i>. 2007 Jun; 107 (6): 962-967. PMID: 17524717.</p>	<p>Study design is a non-randomized controlled trial.</p>
<p>Close RN, Schoeller DA. The financial reality of overeating. <i>J Am Coll Nutr</i>. 2006 Jun; 25 (3): 203-209. PMID: 16766778.</p>	<p>Does not answer the question; did not examine the relationship between the food environment and weight.</p>
<p>Colagiuri R, Colagiuri S, Yach D, Pramming S. The answer to diabetes prevention: Science, surgery, service delivery or social policy? <i>Am J Public Health</i>. 2006 Sep; 96 (9): 1, 562-1, 569. Epub 2006 Jul 27. PMID: 16873751.</p>	<p>Study design is a narrative review.</p>
<p>Conti AA, Lippi D, Gensini GF. Obesity and nutritional behavior within a historical perspective. <i>Minerva Gastroenterol Dietol</i>. 2004 Jun; 50 (2): 171-177. PMID: 15722988.</p>	<p>Study design is a narrative review.</p>
<p>Cummings S, Parham ES, Strain GW; American Dietetic Association. Position of the American Dietetic Association: Weight management. <i>J Am Diet Assoc</i>. 2002 Aug; 102 (8): 1, 145-1, 155., PMID: 12171464.</p>	<p>Study design is a narrative review.</p>
<p>Ezzati M, Vander Hoorn S, Lawes CM, Leach R, James WP, Lopez AD, Rodgers A, Murray CJ. Rethinking the "diseases of affluence" paradigm: Global patterns of nutritional risks in relation to economic development. <i>PLoS Med</i>. 2005 May; 2 (5): e133. Epub 2005 May 3. PMID: 15916467.</p>	<p>Study design is a narrative review.</p>
<p>Ferreira I, van der Horst K, Wendel-Vos W, Kremers S, van Lenthe FJ, Brug J. Environmental correlates of physical activity in youth: A review and update. <i>Obes Rev</i>. 2007 Mar; 8 (2): 129-154. Review. PMID: 17300279.</p>	<p>Does not answer the question; examines the relationship between the environment and physical activity.</p>
<p>Garrett J, Ruel MT. The coexistence of child undernutrition and maternal overweight: Prevalence, hypotheses and programme and policy implications. <i>Matern Child Nutr</i>. 2005 Jul; 1 (3): 185-196. PMID: 16881899.</p>	<p>Study population not from a developed country as defined by the Human Development Index (2010).</p>
<p>Haskell WL. Cardiovascular disease prevention and lifestyle interventions: Effectiveness and efficacy. <i>J Cardiovasc Nurs</i>. 2003 Sep-Oct; 18 (4): 245-255. Review. PMID: 14518600.</p>	<p>Does not answer the question; did not examine the relationship between the food environment and weight.</p>

<p>Hassink SG, Pediatric Expert Panel. Weighing risk: The expert committee's recommendations in practice. <i>Semin Pediatr Surg.</i> 2009 Aug; 18 (3): 159-167. PMID: 19573758.</p>	<p>Study design is a narrative review.</p>
<p>Hildebrand DA, Betts NM. Assessment of stage of change, decisional balance, self-efficacy and use of processes of change of low-income parents for increasing servings of fruits and vegetables to preschool-aged children. <i>J Nutr Educ Behav.</i> 2009 Mar-Apr; 41 (2): 110-119. PMID: 19304256.</p>	<p>Study design is a narrative review.</p>
<p>Irala-Estévez JD, Groth M, Johansson L, Oltersdorf U, Prättälä R, Martínez-González MA. A systematic review of socio-economic differences in food habits in Europe: Consumption of fruit and vegetables. <i>Eur J Clin Nutr.</i> 2000 Sep; 54 (9): 706-714. PMID: 11002383.</p>	<p>Does not answer the question; did not examine the relationship between the food environment and weight.</p>
<p>Kristjansson EA, Robinson V, Petticrew M, MacDonald B, Krasevec J, Janzen L, Greenhalgh T, Wells G, MacGowan J, Farmer A, Shea BJ, Mayhew A, Tugwell P. School feeding for improving the physical and psychosocial health of disadvantaged elementary school children. <i>Cochrane Database Syst Rev.</i> 2007 Jan 24; (1): CD004676. Review. PMID: 17253518.</p>	<p>Does not answer the question; did not examine the relationship between the food environment and weight.</p>
<p>Kwak L, Kremers SP, Werkman A, Visscher TL, van Baak MA, Brug J. The NHF-NRG In Balance-project: The application of Intervention Mapping in the development, implementation and evaluation of weight gain prevention at the work site. <i>Obes Rev.</i> 2007 Jul; 8 (4): 347-361. Review. PMID: 17578384.</p>	<p>Study design is a narrative review.</p>
<p>Lytle LA. Measuring the food environment: State of the science. <i>Am J Prev Med.</i> 2009 Apr; 36 (4 Suppl): S134-S144. Review. PMID: 19285204.</p>	<p>Does not answer the question; did not examine the relationship between the food environment and weight.</p>
<p>Management of obesity in adults: Project for European primary care. <i>Int J Obes Relat Metab Disord.</i> 2004 May; 28 Suppl 1: S226-S231. No abstract available. PMID: 15162196.</p>	<p>Does not answer the question; did not examine the relationship between the food environment and weight.</p>
<p>Mavoia HM, McCabe M. Sociocultural factors relating to Tongans' and Indigenous Fijians' patterns of eating, physical activity and body size. <i>Asia Pac J Clin Nutr.</i> 2008;17 (3): 375-384. Review. PMID: 18818156.</p>	<p>Study population not from a developed country as defined by the Human Development Index (2010).</p>

McClelland JW, Keenan DP, Lewis J, Foerster S, Sugerman S, Mara P, Wu S, Lee S, Keller K, Hersey J, Lindquist C. Review of evaluation tools used to assess the impact of nutrition education on dietary intake and quality, weight management practices and physical activity of low-income audiences. <i>J Nutr Educ.</i> 2001; 33 Suppl 1: S35-S48. Review. PMID: 12857543.	Does not answer the question; did not examine the relationship between the food environment and weight.
McKinnon RA, Reedy J, Morrissette MA, Lytle LA, Yaroch AL. Measures of the food environment: A compilation of the literature, 1990-2007. <i>Am J Prev Med.</i> 2009 Apr; 36 (4 Suppl): S124-S133. Review. PMID: 19285203.	Does not answer the question; did not examine the relationship between the food environment and weight.
McLaren L. Socioeconomic status and obesity. <i>Epidemiol Rev.</i> 2007; 29: 29-48. Epub 2007 May 2. Review. PMID: 17478442.	Does not answer the question; did not examine the relationship between the food environment and weight.
McNeill G, Tuya C, Smith WC. The role of genetic and environmental factors in the association between birth weight and blood pressure: Evidence from meta-analysis of twin studies. <i>Int J Epidemiol.</i> 2004 Oct; 33 (5): 995-1,001. Epub 2004 Sep 16. Review. PMID: 15375085.	Does not answer the question; did not examine the relationship between the food environment and weight.

Articles	Reason for Exclusion
Nowicka P, Flodmark CE. Family in pediatric obesity management: A literature review. <i>Int J Pediatr Obes.</i> 2008; 3 Suppl 1: 44-50. Review. PMID: 18278632.	Does not answer the question; did not examine the relationship between the food environment and weight.
O'Connor T. Deconstructing the 'obesity epidemic'. <i>Nurs N Z.</i> 2007 Nov; 13 (10): 12-13. No abstract available. PMID: 18084965.	Study design is a narrative review.
Oldroyd J, Burns C, Lucas P, Haikerwal A, Waters E. The effectiveness of nutrition interventions on dietary outcomes by relative social disadvantage: A systematic review. <i>J Epidemiol Community Health.</i> 2008 Jul; 62 (7): 573-579. Review. PMID: 18559438.	Does not answer the question; did not examine the relationship between the food environment and weight.

<p>Papandreou C, Mourad TA, Jildeh C, Abdeen Z, Philalithis A, Tzanakis N. Obesity in Mediterranean region (1997-2007): A systematic review. <i>Obes Rev</i>. 2008 Sep; 9 (5): 389-399. Epub 2008 Feb 1. Review. PMID: 18248588.</p>	<p>Does not answer the question; did not examine the relationship between the food environment and weight.</p>
<p>Pearson N, Biddle SJ, Gorely T. Family correlates of fruit and vegetable consumption in children and adolescents: A systematic review. <i>Public Health Nutr</i>. 2009 Feb; 12 (2): 267-283. Epub 2008 Jun 18. Review. PMID: 18559129.</p>	<p>Does not answer the question; did not examine the relationship between the food environment and weight.</p>
<p>Pomerleau J, Lock K, Knai C, McKee M. Interventions designed to increase adult fruit and vegetable intake can be effective: A systematic review of the literature. <i>J Nutr</i>. 2005 Oct; 135 (10): 2, 486-2, 495. Review. PMID: 16177217.</p>	<p>Does not answer the question; did not examine the relationship between the food environment and weight.</p>
<p>Power C, Parsons T. Nutritional and other influences in childhood as predictors of adult obesity. <i>Proc Nutr Soc</i>. 2000 May; 59 (2): 267-272. Review. PMID: 10946795.</p>	<p>Does not answer the question; did not examine the relationship between the food environment and weight.</p>
<p>Reilly JJ, Methven E, McDowell ZC, Hacking B, Alexander D, Stewart L, Kelnar CJ. Health consequences of obesity. <i>Arch Dis Child</i>. 2003 Sep; 88 (9): 748-752. Review. PMID: 12937090.</p>	<p>Does not answer the question; did not examine the relationship between the food environment and weight.</p>
<p>Rosenkranz RR, Dzewaltowski DA. Model of the home food environment pertaining to childhood obesity. <i>Nutr Rev</i>. 2008 Mar; 66 (3): 123-140. Review. PMID: 18289177.</p>	<p>Study design is a narrative review.</p>
<p>Rowland K, Wallace R. Clinical inquiries: Which factors increase the risk of an infant becoming an overweight child? <i>J Fam Pract</i>. 2009 Jul; 58 (7): 383-384. Review. PMID: 19607779.</p>	<p>Study design is a narrative review.</p>
<p>Senekal M, Steyn NP, Nel JH. Factors associated with overweight/obesity in economically active South African populations. <i>Ethn Dis</i>. 2003 Winter; 13 (1): 109-116. PMID: 12723019.</p>	<p>Study population not from a developed country as defined by the Human Development Index (2010).</p>
<p>Shaikh AR, Yaroch AL, Nebeling L, Yeh MC, Resnicow K. Psychosocial predictors of fruit and vegetable consumption in adults a review of the literature. <i>Am J Prev Med</i>. 2008 Jun; 34 (6): 535-543. Review. PMID: 18471592.</p>	<p>Does not answer the question; did not examine the relationship between the food environment and weight.</p>

<p>Shrewsbury V, Wardle J. Socioeconomic status and adiposity in childhood: A systematic review of cross-sectional studies 1990-2005. <i>Obesity</i> (Silver Spring). 2008 Feb; 16 (2): 275-284. Review. PMID: 18239633.</p>	<p>Does not answer the question; did not examine the relationship between the food environment and weight.</p>
<p>Skelton JA, DeMattia LG, Flores G. A pediatric weight management program for high-risk populations: A preliminary analysis. <i>Obesity</i> (Silver Spring). 2008 Jul; 16 (7): 1, 698-1, 701. Epub 2008 Apr 24. PMID: 18451781.</p>	<p>Study design is a retrospective cohort study.</p>
<p>van Hanswijck de Jonge L, Waller G, Stettler N. Ethnicity modifies seasonal variations in birth weight and weight gain of infants. <i>J Nutr</i>. 2003 May; 133 (5): 1, 415-1, 418. PMID: 12730431.</p>	<p>Does not answer the question; did not examine the relationship between the food environment and weight.</p>
<p>Viswanath K, Bond K. Social determinants and nutrition: reflections on the role of communication. <i>J Nutr Educ Behav</i>. 2007 Mar-Apr; 39 (2 Suppl): S20-S24. Review. PMID: 17336801.</p>	<p>Study design is a narrative review: Does not answer the question; did not examine the relationship between the food environment and weight.</p>
<p>Vucic V, Glibetic M, Novakovic R, Ngo J, Ristic-Medic D, Tepsic J, Ranic M, Serra-Majem L, Gurinovic M. Dietary assessment methods used for low-income populations in food consumption surveys: A literature review. <i>Br J Nutr</i>. 2009 Jul; 101 Suppl 2: S95-S101. Review. PMID: 19594969.</p>	<p>Does not answer the question; did not examine the relationship between the food environment and weight.</p>
<p>Wadsworth LA, Thompson AM. Media literacy: A critical role for dietetic practice. <i>Can J Diet Pract Res</i>. 2005 Spring; 66 (1): 30-36. Review. PMID: 15780154.</p>	<p>Does not answer the question; did not examine the relationship between the food environment and weight.</p>
<p>Wang Y, Beydoun MA. The obesity epidemic in the United States. Gender, age, socioeconomic, racial/ethnic and geographic characteristics: A systematic review and meta-regression analysis. <i>Epidemiol Rev</i>. 2007; 29: 6-28. Epub 2007 May 17. Review. PMID: 17510091.</p>	<p>Does not answer the question; did not examine the relationship between the food environment and weight.</p>
<p>Wang Y, Chen HJ, Shaikh S, Mathur P. Is obesity becoming a public health problem in India? Examine the shift from under- to over nutrition problems over time. <i>Obes Rev</i>. 2009 Jul; 10 (4): 456-474. Epub 2009 Mar 6. Review. PMID: 19389062.</p>	<p>Study population not from a developed country as defined by the Human Development Index (2010).</p>

<p>Wang Y, Mi J, Shan XY, Wang QJ, Ge KY. Is China facing an obesity epidemic and the consequences? The trends in obesity and chronic disease in China. <i>Int J Obes</i> (Lond). 2007 Jan; 31 (1): 177-188. Epub 2006 May 2. PMID: 16652128.</p>	<p>Study population not from a developed country as defined by the Human Development Index (2010).</p>
<p>Wendel-Vos W, Droomers M, Kremers S, Brug J, van Lenthe F. Potential environmental determinants of physical activity in adults: A systematic review. <i>Obes Rev.</i> 2007 Sep; 8 (5): 425-440. Review. PMID: 17716300.</p>	<p>Does not answer the question; did not examine the relationship between the food environment and weight.</p>
<p>Wildes JE, Emery RE, Simons AD. The roles of ethnicity and culture in the development of eating disturbance and body dissatisfaction: A meta-analytic review. <i>Clin Psychol Rev.</i> 2001 Jun; 21 (4): 521-551. PMID: 11413866.</p>	<p>Does not answer the question; did not examine the relationship between the food environment and weight.</p>
<p>Wisniewski AB, Chernausk SD. Gender in childhood obesity: Family environment, hormones and genes. <i>Gend Med.</i> 2009; 6 Suppl 1: 76-85. Review. PMID: 19318220.</p>	<p>Does not answer the question; did not examine the relationship between the food environment and weight.</p>